

Interview

The courtesy of the Examiner in conducting an interview on August 7, 1996 and the helpful suggestions of the Examiner at that interview are appreciated. The Interview Summary prepared at the time of the interview correctly summarizes the substance of the interview.

The above amendments to the claims should be entered because they adopt suggestions of the Examiner at the interview.

Response to Rejections under 35 U.S.C. §112

Claim 33 was rejected under 35 U.S.C. §112, second paragraph. Claim 33 now depends from claim 32. This claim does comply with 35 U.S.C. §112, second paragraph.

For the reasons set forth above, the Examiner is requested to reconsider and withdraw the rejection of claim 33 under 35 U.S.C. §112, second paragraph.

Response to Rejections under 35 U.S.C. §103

Before discussing the rejections based on prior art, a brief description of the subject matter claimed as a whole is set forth. The present claims are directed to an electric motor which is to be used in an electrically driven vehicle. The motor can be oil cooled. The motor has a rotor with a laminated core and a laminated stator core. The cores include a plurality of laminations. The stator core, for example, has a plurality of

status slots formed therein. The rotor core includes a plurality of rotor slots having a cast conductor disposed therein. To insulate the cast conducting metal, the rotor slots have an electrical insulating coating. This coating also protects the laminations of the rotor slots during formation of the cast metal. In certain of the dependent claims, the electrical insulating coating is claimed as a ceramic based coating of specific materials.

The purpose of the electrical insulating coating is two-fold. First, the electrical insulating coating has a high dielectric strength, thus providing an insulating layer between the cast conducting metal and the slot laminations (specification page 7, lines 26 to 29) during operation of the motor. Secondly, the electrical insulating core has specific physical characteristics to protect the lamination from adverse results during the casting of the cast metal (specification, page 7, lines 14 to 23).

Response to First Rejection under 35 U.S.C. §103

Claims 1, 10, 13 and 14 were rejected under 35 U.S.C. §103 as being unpatentable over Tanaka in view of Fujii and Petrichenko. This rejection is traversed.

The combination of these references does not establish a prima facie case of obviousness for any one of the reasons as follows:

1. Petrichenko is non-analogous to the invention and to the references applied, or

2. Outside of the Applicant's own disclosure there would be no motivating reason to combine Petrichenko with the other references.

As to reason 1, Petrichenko is non-analogous to the present invention. Petrichenko is directed to a die used in a factory. The purpose of Petrichenko is to provide a coating on the die so that the die can be repeatedly used to save costs.

In determining whether the art is non-analogous, attention is directed to the criteria set forth in In re Wood, 599, Fed. 2nd 1032 202 USPQ 171, 174 (CCPA 1979). In that case the Court set forth the test of non-analogous art which is as follows:

In resolving the question of obviousness under 35 USC §103, we presume full knowledge by the inventor of all the prior art in the field of his endeavor. However, with regard to prior art outside the field of his endeavor, we only presume knowledge from those arts reasonably pertinent to the particular problem with which the inventor was involved. . . . The rationale behind this rule precluding rejections based on combination of teachings of references from non-analogous arts is the realization that an inventor could not possibly be aware of every teaching in every art. Thus, we attempt to more closely approximate the reality of the circumstances surrounding the making of an invention by only presuming knowledge by the inventor of prior art in the field of his endeavor and in analogous arts.

The determination that a reference is from a non-analogous art is therefore two-fold. First, we decide if the reference is within the field of the inventor's endeavor. If it is not, we proceed to determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved. (underline added)

Applying the first test set forth in In re Wood, on its face, Petrichenko is not within the same field of the Inventor's endeavor. Petrichenko is concerned with a manufacturing process in a factory where a die can be repeatedly used at a reduced cost. The present application, as specifically claimed, is directed to an electrical motor. Clearly these two areas are not within the same field of endeavor.

Furthermore, applying the second test in In re Wood, the reference to Petrichenko is non-analogous because it is not reasonably pertinent to the particular problem which the inventor faced. The inventor in this application, who is the problem solver, was concerned with two problems. First, the Inventor was concerned with providing an electrical insulating material having the necessary insulating properties to insulate the cast metal conductor in an electric motor which is for use in an electric vehicle. Additionally, the Inventor was concerned with protecting the laminations of the electrical motor from the cast metal when it was formed. These are not the same or similar problems faced by Petrichenko.

For further discussion of analogous and non-analogous art, attention is directed to the M.P.E.P. §2141.01(a). In that section, In re Oetiker (cited therein) refers to the case of In re Wood, referred to above.

For the reasons set forth above, clearly the Petrichenko reference is non-analogous. Accordingly, without the Petrichenko

reference, there is no suggestion of a cast metal with an electrical insulating coating that not only insulates in the electric motor but protects the laminations of the motor.

Secondly, there would be no motivating reason to combine the references including Petrichenko to arrive at the claims without benefit of the Applicant's own disclosure as a template in restructuring the art.

For the reasons set forth above, the Examiner is requested to reconsider and withdraw the rejection of claims 1, 10, 13 and 14 under 35 U.S.C. §103.

Response to Second Rejection under 35 U.S.C. §103

Claims 22 to 25 were rejected under 35 U.S.C. §103 as being unpatentable over Tanaka in view of Fujii and Petrichenko.

For the reasons set forth in the response to the first rejection supra, there is no prima facie case of obviousness. Additionally, these claims add details of the electrical insulating coating. Even assuming arguendo that the compositions claimed are "well-known", there is no motivating reason to use these particular compositions in the combination claimed to arrive at the results of a proper electrical insulating material that protects the laminations. Additionally, no reference has been supplied to show that these compositions are "well-known". See M.P.E.P. §2144.03.

For the reasons set forth above, the Examiner is requested to reconsider and withdraw the rejection of claims 22 to 25 under 35 U.S.C. §103.

Response to Third Rejection under 35 U.S.C. §103

Claims 26 to 28, 36 to 38 were rejected under 35 U.S.C. §103 as being unpatentable over Tanaka in view of Petrichenko. This rejection is traversed.

This rejection is substantially similar to the rejection of claims 1, 10, 13 and 14 except the Fujii reference has not been applied as these claims do not require the specific cooling means.

This rejection also does not establish a prima facie case of obviousness because the Petrichenko reference is non-analogous and there would be no motivating reason to provide the combination outside of the Applicant's own disclosure and claims. The reasons supporting this are set forth in the response to the Second Rejection supra which is incorporated herein.

For the reasons set forth above, the Examiner is requested to reconsider claims 26 to 28 and 36 to 38 under 35 U.S.C. §103 and withdraw the rejection.

Response to Fourth Rejection under 35 U.S.C. §103

Claims 29 to 35 and 39 to 43 were rejected under 35 U.S.C. §103 as being unpatentable over Tanaka in view of Petrichenko. This rejection is traversed.

This rejection is substantially similar to the rejection of claims 22 to 25 responded to above. This rejection does not apply the Fujii reference because the specific cooling has not been claimed. The rejection does not support a prima facie case of obviousness for substantially the same reasons as advanced with respect to the response to the rejection of claims 22 to 25 set forth above. That is, the Petrichenko is non-analogous, there is no motivating reason to provide the combination and no art has been cited to show the specific ceramic material claimed in the specific combination for achieving the results of insulating and protecting the laminations.

For the reasons set forth above, the Examiner is requested to reconsider and withdraw the rejection of claims 26 to 28, 36 to 38 under 35 U.S.C. §103.

If the Examiner has any questions, the Examiner is requested to contact Elliot A. Goldberg at (703) 205-8000 in the Washington, D.C. area, or Philip A. Florenzo at (410) 765-3128 in the Baltimore, Md. area.

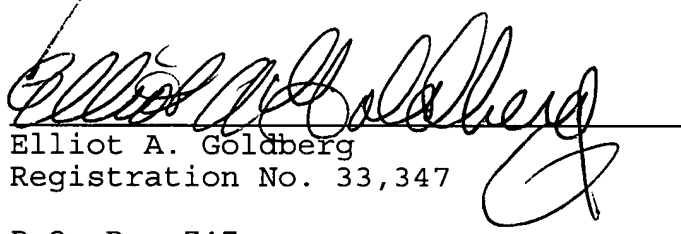
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Respectfully submitted,

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